

MOUNT STIRLING.—A small piece, weighing $14\frac{3}{4}$ ozs., was found at the same locality and is now in the collection of the Australian Museum, Sydney. It is most probably a portion of the larger mass.

YOUNDEGIN, No. 1.—

Coll.—One piece weighing 22 lbs. is in the Technological Museum, Melbourne, Victoria.

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THE QUEENSLAND CATTLE TICK.

By W. J. RAINBOW, F.L.S., Entomologist.

IN the *Mémoires de la Société Zoologique de France*, Tome x., 1897, just to hand, Prof. G. Neumann publishes a valuable and lengthy paper under the title of “Revision de la Famille des Ixodidés.” Amongst the species dealt with there is, of course, that interesting but much dreaded beast, the Queensland Cattle Tick.

According to Neumann, this species is *Rhipicephalus annulatus*, Say, and the synonymy as follows*:—*Ixodes annulatus*, Say; *Hemaphysalis rosea*, Koch; *Ixodes bovis*, Riley; *I. dugesii*, Mégnin; *Hemaphysalis micropla*, Canestrini; *Boophilus bovis*, Curtis; and *Rhipicephalus calcaratus*, Birula. Referring to Say's original description† and the above synonymy, the reviser

* *Mém. de la Soc. Zool. de France*, x., 1897, p. 325.

† *Proc. Acad. Nat. Sci. Phil.*, ii., 1821, p. 75.

appends a foot-note,* of which the following is a free translation : Say's description is too incomplete to enable one to affirm, with absolute certainty, that the following forms are synonymous ; nevertheless it is highly probable that they are. This is invariably the case with all the old descriptions of Ixodides. Say concluded his description with the following remark :—" Found in considerable numbers on a *Cervus virginianus*, in East Florida."

It is interesting to note that *Rhipicephalus annulatus*, which is responsible for the transmission of what is known in the United States as "Texas Fever," is found in Texas, Maryland, Washington, Chicago, Baltimore, Kentucky, Kansas, Arkansas, New Mexico, and Honduras, on cattle ; Cuba, cattle and dogs ; Jamaica, cattle ; Florida, on deer (*Cariacus virginianus*, Bodd.) ; Guadeloupe, on cattle (where it is known as the "Creole Tick," in opposition to the *Hyalomma aegyptium*, or "Senegalese Tick") ; it is also found in Guatemala, Mexico, and Monte Video ; it occurs in Paraguay, where it has been found ensconced under bark of trees, and it has been taken in Timor on the "Sambar" deer (*Rusa equinus*, Cuvier) ; the cattle of the Caucasus and Transcaucasus, of Asia, and of Singapore, are also affected by it ; the pest is also known in North and South Africa ; in Algiers and at Morocco, on African cattle, Barbary and Touarick sheep ; again, it occurs in Egypt, Madagascar, at Cape Lopez, Gaboon, and Port Elizabeth (South Africa). It may, therefore be considered, as Neumann observes, cosmopolitan.

The reviser also described a variety from the typical form, under the name of *Rhipicephalus annulatus caudatus* ; but I would advise those interested in the study of these creatures, to peruse Professor Neumann's work, from which the notes necessary for this brief contribution were made.†

It is evident, from the foregoing, that the danger of the pest spreading is even greater than some of our Australian authorities and experts may have imagined. It is only fair, however, to state that Mr. C. J. Pound, Bacteriologist to the Queensland Government, has, in a recent paper, drawn attention to the means by which Cattle Ticks may be spread. He says‡ :—" Careful and close observations have shown that although the bovine is the only perfect natural host of the Cattle Tick, it is only one of the many agencies for its distribution. It has been proved that the tick will mature, under favourable conditions, upon the horse and the sheep, and that the eggs from such ticks are fertile. I have also found them in various stages of development attached to goats, kangaroos, wallabies, and various kinds of birds, as the ibis, crane, peewit,

* *Loc. cit.*, p. 407.

† *Loc. cit.*, pp. 324-422.

‡ *Proc. Roy. Soc. Queens.*, xiv.. 1899, p. 31.

wild duck, and even on the little shepherd's companion (wagtail)." In addition to these hosts, Mr. Pound points out that "In studying the habits of various species of ticks living apart from their host under natural conditions on some of the northern rivers of this Colony [Queensland], I have noticed that in the larval stage there was a natural inclination or instinct to attach themselves to any moving object, no matter whether animate or inanimate."

The Governments of New South Wales and Queensland have, in their wisdom, delimited a boundary beyond which cattle from affected areas must not pass without inspection and treatment, and this, so far as it goes, is very right and proper. It has been urged that the cattle tick cannot thrive on hosts other than bovines; but even supposing so, the fact that living examples have, in different parts of the world, been found upon deer, sheep, dogs, and even under bark, is in itself sufficiently conclusive evidence as to a means by which "Texas Fever" may be conveyed, and that, in order to be logical and thorough, the quarantine regulations should be extended to *all* animals travelling from the affected districts. It is a recognised fact that the disease is slowly but surely spreading south—hence the necessity of extending the proscribed area; and it is only a question of time, therefore, when it will have invaded New South Wales, and who can tell where or when its devastating march will stop? Stock owners of New South Wales and Victoria would do well, therefore, to note the facts recorded by Professor Neumann.

OCCASIONAL NOTES.

I.—*STEGOSTOMA TIGRINUM*, GMEL.

AN ADDITION TO THE FAUNA OF NEW SOUTH WALES.

On March 14th of the current year, we received from Mr. W. Hibbs an example of the shark *Stegostoma tigrinum*, Gmel.,* caught in the River Hawkesbury, New South Wales. It is a female, measures four feet in length, and in colour nearly agrees with var. 3 of Müller and Henle.† The observations were made while the shark was still alive, it having been received by us in that condition. The ground is creamy, with a greenish hue about the head and dorsal region; the markings are black spots, smaller and regularly arranged on the head, much larger and more widely spaced on the body and fins.

* Gmel.—Linn., p. 1493.

† Müller und Henle—Plagiostomen, p. 24.